

**JC07 Rec'd PCT/PTO 19 AUG 2005**

IN THE UNITED STATES RECEIVING OFFICE (US/DO/EO)

Applicants: Philipp Stössel, Hubert Spreitzer and Ingrid Bach

U.S. Application No.: 10/532,185

371 (c) Filing Date: July 6, 2005

U.S. National Stage of:

International Application No.: PCT/EP2003/010652

International Filing Date: September 25, 2003

For: RHODIUM AND IRIDIUM COMPLEXES

Date: <u>8/19/05</u>
EXPRESS MAIL LABEL NO. <u>EV 215899988 US</u>

TRANSMITTAL OF INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

Mail Stop PCT (DO/EO)  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Enclosed for filing in the U.S. Receiving Office is a copy of the English translation of the International Preliminary Examination Report (5 pages).

Please charge any deficiency or credit any overpayment in the fees that may be due in this matter to Deposit Account No. 08-0380. A copy of this letter is enclosed for accounting purposes.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By Alexander Akhiezer  
Alexander Akhiezer, Ph.D.  
Registration No.: 54,617  
Telephone (978) 341-0036  
Facsimile (978) 341-0136

Concord, Massachusetts 01742-9133

Date: 8/18/05

BEST AVAILABLE COPY

PATENTANWÄLTE \*

EUROPEAN PATENT ATTORNEYS

EUROPEAN TRADEMARK ATTORNEYS \*

Luderschmidt, Schüler &amp; Partner | Industriepark Höchst | D-65926 Frankfurt

Hamilton, Brook, Smith & Reynolds, PC  
P.O. Box 9133  
Concord, MA 01742-9133  
USA

Wolfgang Luderschmidt  
Dr. phil. nat., Dipl. Chem.\*/Wiesbaden

Peter Mai  
Dr. rer. nat., Dipl.-Chem.\*/Wiesbaden

Frank Oppermann  
Dipl.-Ing.\*/Wiesbaden

Klaus Dörr  
Dr. phil. nat., Dipl.-Chem./Frankfurt

Klaus Rupprecht  
Dipl.-Ing.\*/Wiesbaden

K. Dieter Greiber  
Dr. rer. nat., Dipl.-Chem.\*/Wiesbaden

Jürgen Schultheiß  
Dr. phil. nat., Dipl.-Chem., -Wirtschaftschem.\*/Frankfurt

Horst Schüler  
Dr. rer. nat., Dipl.-Chem. † 1999

Helga Schüler  
Dr. rer. nat., Dipl.-Phys. \* bis 2001

Ihr Zeichen | Your Ref.

3724.1003-000

Unser Zeichen | Our Ref.

C02037US

Datum | Date

June 23, 2005

kd/nr

2005019901

**COVION ORGANIC SEMICONDUCTORS GMBH**

US Patent Application 10/532,185

Rhodium and iridium complexes

Dear Colleagues:

We refer to our order letter dated March 22, 2005.

Please find enclosed the International Preliminary Examination Report according to the above mentioned case.

Please confirm the receipt by return fax.

Sincerely yours,

Luderschmidt, Schüler &amp; Partner



Dr. Klaus Dörr

Encl.

Industriepark Höchst, F 821, D-65926 Frankfurt am Main  
Dresdner Bank, Wiesbaden, €-Konto 128 70 11 00 (BLZ 510 800 60), US \$-Account 12 87 011 00/400  
SWIFT: DRESDEFF 510, IBAN: DE 3251080060 0128701100  
VR-Bank Mainz, €-Konto 82 11 000 (BLZ 550 604 17)  
SWIFT: GENODE 51 MZ 2, IBAN: DE 06550604170008211000  
USt.-ID-Nr./VAT REG No: DE 812193075  
Eingetragene Partner: Luderschmidt, Mai, Oppermann, Dörr; PR Bad Vilbel Nr. 1046

**RECEIVED**

JUL - 1 2005

**HAMILTON, BROOK  
SMITH & REYNOLDS, P.C.**

Telefon ++49 (0) 69 / 305 4530-0  
Telefax ++49 (0) 69 / 305 4530-7  
www.luderschmidt.de  
frankfurt@luderschmidt.de

BEST AVAILABLE COPY

**Translation**

**PATENT COOPERATION TREATY**

PCT/EP2003/010652



**PCT**

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference C02037WO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/010652	International filing date (day/month/year) 25 September 2003 (25.09.2003)	Priority date (day/month/year) 26 October 2002 (26.10.2002)
International Patent Classification (IPC) or national classification and IPC C07F 15/00		
Applicant COVION ORGANIC SEMICONDUCTORS GMBH		

**BEST AVAILABLE COPY**

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.  <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of <u>19</u> sheets.
3.	This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 25 May 2004 (25.05.2004)	Date of completion of this report 07 February 2005 (07.02.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/010652

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☒ the description:  
pages 1-33, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages 1-17, filed with the letter of 20 January 2005 (20.01.2005)
- ☐ the drawings:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

BEST AVAILABLE COPY

BEST AVAILABLE COPY

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/10652

BEST AVAILABLE COPY

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-17	YES
	Claims		NO
Inventive step (IS)	Claims	6, 9	YES
	Claims	1-5, 8, 10-17	NO
Industrial applicability (IA)	Claims	1-17	YES
	Claims		NO

## 2. Citations and explanations

This report makes reference to the following documents; the same numbering will be used throughout the procedure:

D1: EP-A-1191613

D2: WO-A-02/060910 (mentioned in the application)

D3: WO-A-02/068435 (mentioned in the application)

D4: Clarke et al. J. Organomet. Chem. XP004193182  
(mentioned in the application)

D1 pertains to tris-ortho-metalated Rh and Ir complexes with identical ligands. D2 also pertains to complexes having three identical ligands. Independent claims 1-3 do not comprise complexes of this type.

In the metal complexes described in D3, H or a halogen, but not a nitro group, is in the para position to the coordinating carbon atom. Novelty is thus established.

The subject matter claimed in the application is novel, but lacks inventive step, since it differs from the prior art (D1-D3) only in minor structural modifications that follow in an obvious manner from the combination of D1 and D2 or D1 and D3.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/10652

The applicant refers in this connection to pages 17-18 of the description where, according to the applicant, advantageous properties of the claimed compounds are described. Point 1 (page 17) pertains to intermediates, the inventive step of which can also derive from that of the end products.

However, this is not the case, since points 2 and 3 pertain, not to a surprising effect, but merely to general information which would be known to a person skilled in the art even without knowledge of the invention, since the use described, for example, in D1 and D2, of the ligands for the same purpose would otherwise be excluded.

D4, which is indicated in the description (page 2, lines 31-35), is the closest prior art with respect to the preparation process. The nitrating reagent used in D4 is Cu(II) in  $\text{Ac}_2\text{O}$ .

Since no surprising effect is demonstrated, claims 1-5, 8 and 10-17 must be considered obvious.

BEST AVAILABLE COPY